In the hope of reducing speculation, the Commission has proposed in the *NPRM* to make major amendments to Sections 21.29 and 21.39 of the Rules, which govern the assignment of MDS applications and conditional licenses and the transfer of control of MDS applicants and conditional licensees.[60] Although WCA certainly has no quarrel with the goal of reducing speculation, WCA opposes those proposed amendments for two fundamental reasons.

First, there is no evidence that the current rules promote speculative MDS applications. To the contrary, Sections 21.29 and 21.39 clearly provide that, except in some rather limited circumstances, the assignment of MDS applications and conditional licenses and the transfer of control of MDS applicants and conditional licensees is barred. One attempting to assign a MDS application or conditional license or attempting to transfer control of a MDS applicant or conditional licensee bears a heavy burden of demonstrating that no trafficking is occuring.

While speculation in MDS applications is rampant, WCA finds it hard to believe that the current rules permitting in very limited instances the assignment of applications and licenses or the transfer of control of applicants and licensees are a contributing factor. Given that most of those filing mill-generated applications are almost by definition unsophisticated regarding the Commission's rules and policies and are not being made fully aware of the those rules and policies by the mills, it is difficult to see

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[60] *See NPRM, supra* note 1, at ¶ 17 n.33.

how the proposed changes will deter additional filings. The same applicants who are today unaware of the current restrictions on assignment and transfer will tomorrow be unaware of any new restrictions.

Second, and by far more importantly, the current rules provide important safety valves that are employed by wireless cable operators to engage in legitimate business activities. For example, as a wireless cable system operator secures equity investment to fund the growth of its system, a transfer of control over the operator often will occur. Such a transfer can occur under the current versions of Sections 21.29 and 21.39, even if an applicant or conditional licensee is involved, so long as it can be shown that the transfer of the application or unconstructed station is incidental to the sale of other facilities. Yet, the language of Sections 21.29(f) and 21.39(a) proposed in the *NPRM* would result in the dismissal of any MDS applications the wireless cable operator has pending before the Commission and the dismissal of any conditional license, even where the transfer of control over the wireless cable operator is clearly to acquire an operating company and not to secure an application or conditional license. Such a result, WCA submits, hardly serves the Commission's interest in promoting the fullest possible development of wireless cable. To the contrary, it could actually spur the filing of speculative and greenmail applications; those knowing that the operator's pending application had to be dismissed or conditional license forfeited upon the transfer of control would file their own applications on the first possible day in order to greenmail the new operator.

Along the same lines, eliminating the not-for-profit assignment of pending applications and conditional licenses will also have an adverse impact on the growth of wireless cable. Particularly in light of the delays since MMDS applications were first filed in 1983 and intervening changes in the video marketplace, many legitimate applicants, such as Kansas City Microwave Corp. and Graphic Scanning Corp., have chosen to abandon their wireless cable efforts. The Commission has permitted their pending applications and conditional licenses to be assigned, so long as the consideration did not exceed the applicants' costs of preparing, filing and prosecuting their applications. The result has been that wireless cable operators have had the opportunity to secure additional channels quickly, and at low cost. Again, if the proposed rule revisions are adopted, those knowing that the pending application had to be dismissed or conditional license forfeited would file their own applications on the first possible day in order to greenmail the local wireless cable system operator.

IV. ADOPTION OF THE REVISED INTERFERENCE PROTECTION RULES PROPOSED IN THE NPRM, EVEN ON AN INTERIM BASIS TO ADDRESS THE EXISTING BACKLOG, WOULD HAVE A DEVASTATING IMPACT ON THE GROWTH OF WIRELESS CABLE.

As the Commission well knows, the current interference protection rules were developed through a series of decisions in the 1980s and early 1990s in an attempt to accommodate three sometimes conflicting goals -- (i) affording each MDS licensee a service area equal in size to the area in which it can provide a high quality signal to subscribers; (ii) protecting previously proposed MDS and ITFS facilities from harmful

interference caused by newcomers; and (iii) avoiding the preclusion of MDS or ITFS service to any geographic region due to over-protection of facilities. Although, as discussed in detail in Section III.C, WCA believes that the formula utilized to calculate protected service area contours must be updated to reflect both changes in the state-of-the-art in receiver technology since the early 1980s and the Commission's 1990 decision to permit higher-power facilities, the fundamental approach of the interference protection rules is sound. By permitting consideration of all relevant variables, including radio horizon, radiated power, polarization, antenna beam tilt, the radiation pattern of transmitting antennas and the gain and discrimination characteristics of reception antennas, the rules balance the goals established by the Commission rather well.

As the *NPRM* concedes, "the advantage of the existing criteria is that they afford licensees a high degree of flexibility in designing their systems."[61] That flexibility has served the public well. Employing sophisticated engineering techniques, wireless cable operators have been able to maximize coverage of closely-spaced population centers, to design around pre-existing ITFS systems, and to commence operations despite MDS and ITFS applications filed for greenmail purposes. Particularly in and around the major markets, where pre-existing ITFS use and the number of speculative MDS applications are greatest, the current interference protection rules have played a critical role in the development of the industry.

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[61] *NPRM supra*, note 1, at ¶ 12.

For example, the wireless cable systems in the New York and Los Angeles Consolidated Metropolitan Statistical Areas, which are the nation's two largest wireless cable systems, simply could not have been developed under the rules proposed in the *NPRM* -- the proposed co-channel and adjacent channel standards would have forced these systems to retreat to rural areas. Similarly, the developer of the wireless cable system in Houston, which recently filed with the Commission applications to collocate all thirty-one 2.5 GHz channels at a single site, could not have completed that project under the rules proposed in the *NPRM*. In each of these cases, the system developer employed all of the tools in its engineers' workshop to assure interference protection to previously proposed ITFS and, in some cases, MDS facilities -- tools the *NPRM* proposes to take away. For the reasons that will be addressed below, it is safe to say that adoption of the interference protection rules proposed in the *NPRM* will stymie development of wireless cable, particularly in the major markets where there tend to be more previously proposed stations with which system developers must contend. Thus, WCA opposes the revised technical rules proposed in the *NPRM*, even as an interim mechanism to address the MDS application backlog.

In considering the issues raised in the *NPRM*, WCA urges the Commission to carefully weigh the proven benefits of the current rules against the serious adverse ramifications of adopting the alternatives proposed in the *NPRM*. Moving to the fixed mileage station-to-station separation standards, adopting antenna height restrictions, and modifying the nature of the protection that must be afforded ITFS receive sites as

proposed in the *NPRM*, even on an interim basis to address the current backlog, would devastate the wireless cable industry.[62]

A. Adoption Of The Eighty and Forty-Eight Kilometer Cochannel and Adjacent Channel Station-To-Station Separation Standards Proposed In The NPRM Would Frustrate The Growth Of Wireless Cable.

As WCA will demonstrate below, the use of station-to-station separation standards for processing MDS applications, regardless of the separation values employed and even if used only on an interim basis, would not be appropriate. Before addressing those issues, however, WCA must point out some critical errors in the methodology employed in the *NPRM* to derive the proposed eighty kilometer cochannel standard and the forty-eight kilometer adjacent channel standard.

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[62]In Paragraphs 26 through 28 of the *NPRM*, the Commission has sought comment on an alternative approach to MDS licensing under which a licensee would be chosen for each Metropolitan Statistical Area ("MSA") or Rural Service Area ("RSA") and the service area of each licensee would be restricted to its MSA or RSA. WCA strongly opposes such an alternative approach. While basing service areas upon geographic boundaries makes sense where service providers utilize multiple transmitter sites, each with a relatively short reach, it is inappropriate for a service, such as wireless cable, that relies upon a single high power transmitter. It is simply not possible for a wireless cable operator to tailor its signal to serve within the political boundaries of a MSA or RSA, but not beyond. At a minimum, it would be essential for the Commission to grandfather existing facilities, since many wireless cable systems today have been located at sites from which more than one MSA or RSA can be served. However, grandfathering existing facilities would not be enough. The Commission would have to permit the collocation of new stations with existing facilities in order to avoid stranding operators who are in the process of securing additional channels. Otherwise, wireless cable operators may find themselves unable to add to existing systems additional channels necessary to provide a viable service, undermining the Commission's efforts to promote wireless cable as an effective participant in the video marketplace.

1. Any Separation Standards Must Be Calculated To Reflect The Mounting Of Reception Equipment Above Ground Level.

Although the *NPRM* seeks comment as to whether the height of the reception antenna should be considered in determining how closely stations should be spaced, the specific eighty and forty-eight kilometer separation standards proposed in the *NPRM* were calculated assuming that reception antennas are mounted on the ground.[63] The Commission has previously recognized that "30 feet is representative of the actual heights at which antennas generally will be mounted on private residences" and has required that electrical horizon and interference calculations be made assuming the installation of the reception antenna at a height thirty feet above ground.[64] Indeed, the Commission affirmed that determination as recently as its October 26, 1990 *Report and Order* in General Docket No. 90-54.[65]

In the *NPRM*, the Commission concludes that signals from transmission antennas located 180 kilometers HAAT will have an electrical horizon of 56 kilometers.[66] However, when a thirty foot high reception antenna is considered, the

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[63]*See NPRM, supra* note 1, at ¶ 12 n.20.

[64]*80-113 FR&O, supra* note 51, 98 F.C.C.2d at 111. *See also* 47 C.F.R. §21.902(d)(3)(1991).

[65]*See Gen. Docket No. 90-54 R&O, supra* note 2, 5 FCC Rcd at 6422.

[66]The Commission's calculation of a 56 kilometer electrical horizon was based on an assumption of flat earth. However, as WCA discusses in more detail below, the calculation of any separation standard based upon an assumed transmission antenna (continued...)

electrical horizon extends from 56 kilometers to 75 kilometers, everything else being equal. Thus, even if the Commission intends to adopt separation standards despite the considerations set forth by WCA below, at a minimum it must recalculate those standards to reflect the increased range of the "typical" station assumed in the *NPRM*.

2. The *NPRM* Makes Other Erroneous Assumptions That Must Be Corrected.

The *NPRM* also bases its separation calculations on the assumption that wireless cable reception antennas are omni-directional.[67] In fact, as the Commission has previously recognized, wireless cable reception antennas are not omni-directional, but rather provide a high degree of angular discrimination. And, as the Commission has recognized, "[a]n MDS receive antenna's angular discrimination characteristics can control to an important degree the level of unwanted signals received . . . .."[68] Indeed, the Commission has determined that "[s]ince angular discrimination is an important factor in avoiding harmful interference we cannot . . . ignore its efficiency."[69] Yet that is

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[66](...continued)
HAAT is suspect, because wireless cable systems transmit far beyond the 10 mile range at which HAAT calculations are made and because HAAT calculations are cused by the consideration of points evenly dispersed in a 360 degree circle.

[67]*See NPRM supra* note 1, at ¶ 12 n. 24.

[68]*Amendment of Parts 21, 74 and 94 of the Commission's Rules and Regulations With Regard To the Multipoint Distribution Service, the Instructional Television Fixed Service adn teh Private Operational-Fixed Microwave Service (OFS)*, 45 Fed. Reg. 29,350, 29,352 (1980).

[69]*Id.*

precisely what the *NPRM* does -- it ignores angular discrimination and all of the other engineering tools wireless cable system designers employ to more efficiently utilize the spectrum.

In addition, Commission has based its calculations on the assumption that all stations operate at the same equivalent isotropic radiated power ("EIRP"). That simply is not true. Given the various possible transmitter output power levels, line and combiner losses, and gains associated with different transmission antennas, it is rare indeed that two cochannel or adjacent channels stations being studied for potential interference actually operate at the same EIRP in the direction of a given receiver.

Finally, the specific standards proposed in the *NPRM* are based on the assumption that the HAAT of a MDS transmitting antenna would be 180 meters.[70] As WCA discusses in detail below, not only do many existing wireless cable systems operate at a HAAT above 180 meters, but HAAT is fundamentally flawed as a measure for use in establishing wireless cable interference protection standards.

3. Adoption Of The Proposed Station-To-Station Separation Standards Would Be Inappropriate.

In the *NPRM*, the Commission has proposed to replace the Commission's current rules regarding MDS interference protection with an eighty kilometer co-channel

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[70] *See NPRM, supra* note 1, at ¶ 12 n. 20.

and a forty-eight kilometer adjacent channel station-to-station separation standard. WCA is unalterably opposed to that approach.

The underlying flaw in the Commission's advocacy of a station-to-station separation standards is a failure to consider that a vast number of MDS and ITFS stations that have already authorized by the Commission. If station-to-station separation standards are implimented, the recognized public interest benefits both of collocating adjacent channel facilities with those stations and of placing cochannel facilities as close as possible to these existing facilities without causing electrical interference to either system will be lost. Whatever the merits of fixed mileage standards may be in other services, it is simply inappropriate to overlay fixed mileage standards on the MDS at this advanced stage of the wireless cable industry's development.

At the outset, any fixed mileage standard will be inconsistent with the need of the wireless cable industry to collocate additional channels with those that are already authorized. WCA is aware of numerous situations in which an application is pending that proposes to collocate additional channels at an existing wireless cable system headend. To cite just one of many examples, a wireless cable operator was forced to construct a three channel system when its H Group authorization was about to expire, despite the fact that the Domestic Radio Branch had not yet processed its MMDS applications. Although the headend is within 80 kilometers of another system, an intermediate mountain range precludes any potential for interference between the systems. Thus, the operator was able to take advantage of terrain shielding, and its MMDS applications fully comport with

the current rules. If the rules proposed in the *NPRM* go into effect, however, the pending application will be denied and the operator's investment in its current facility stranded.

The Commission's proposal with respect to adjacent channel separation is particularly troublesome. As envisioned in the *NPRM*, an applicant would be required to either colocate with an adjacent channel facility or locate forty-eight kilometers away. Such an approach is not only unnecessary (utilizing the wide array of interference protection techniques available in the design of stations, non-collocated stations can be situated extremely close together), it would effectively preclude the development of wireless cable in areas with significant prior ITFS utilization. In areas with extensive ITFS use, it is frequently the case that the ITFS stations are not themselves collocated. Obviously, if the ITFS stations are not collocated, then it is impossible for a wireless cable cable operator to secure licenses for adjacent channel MDS facilities unless the wireless cable station is located at least 48 kilometers from the nearest ITFS station. As a practical matter, adoption of the Commission's proposed rule will, in effect, preclude the development of wireless cable in the major urban markets with pre-existing ITFS facilities.

The paradox of the proposed eighty kilometer co-channel mileage standard is that it proves to be both too short and too long.[71] Eighty kilometers is too short a

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[71]While a fifty mile rule did not prove troublesome when the three H Group channels were regulated by the Private Radio Bureau, that was largely because H Group channels (continued...)

standard because a proposed station operating at maximum power can certainly cause interference to subscribers of a wireless cable system located more than eighty kilometers away if line-of-sight exists. A few opportunists have already learned how to take advantages of the inadequate definition of the PSA to engage in greenmail: the instances of greenmail will inevitably increase if a simplistic eighty kilometer co-channel station-to-station separation standard is implemented.

Ironically, an eighty kilometer standard will also force systems farther away from each other than necessary in some cases. As noted above, it has been demonstrated that systems can operate within eighty kilometers of each other under appropriate circumstances by judicious use of cardioid antennas, cross-polarization, radiated power levels, beam tilt, antenna heights and terrain shielding. In several cases, systems within eighty kilometers of each other are currently under development. Some sort of grandfathering or waiver process is necessary to avoid inequities to those who are in the processing of collocating channels at sites within any fixed mileage standard of each other.

Incorporating a short-spacing derating table into the rules that would adjust the fixed mileage standard based on power and tower HAAT does not resolve the problem. While such an approach is certainly superior to a fixed mileage standard, it

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[71](...continued)
were being collocated with previously proposed MDS facilities. Thus, it was the MDS interference protection rules that were effectively determining where H Group stations were located.

still does not incorporate cross-polarization, terrain factors, cardioid antennas and beam tilt, undoubtably the four most frequent tools used by engineers to design stations in close proximity one to the other.

B. The Commission Should Abandon Its Proposal To Require MDS Conditional Licensees To Protect Actual ITFS Receive Sites Installed At The Time MDS Operations Commence.

In WCA's experience, to the extent engineering analysis has delayed the processing of MDS applications, it has been with respect to the protection of ITFS receive sites. Because the MDS application processing staff does not have direct access to ITFS receive site information, there has been a processing lag. The solution, however, is to provide the MDS processing staff with access to a definitive database, not to abandon pre-licensing review of the potential for interference to ITFS receive sites in favor of a requirement that MDS conditional licensees protect actual ITFS receive sites installed at the time MDS operations commence.

Indeed, the approach advocated in the *NPRM* will likely prove quite problematic for several reasons. First, it will have a devastating impact on the ability of wireless cable operators to secure financing. It is virtually impossible today to secure financing until licenses for the 20 or more channels necessary to provide a viable service are in hand. Investors take great comfort in the fact that once licenses are issued and the time for seeking reconsideration or review has passed, operating authority cannot be challenged on interference grounds. If the Commission begins to issue licenses that are

conditioned on avoiding actual interference to any co-channel or adjacent channel ITFS facilities, WCA suspects it will be difficult for operators to secure the $1 million or more in financing it can take just to construct a wireless cable transmission facility.

Second, but no less importantly, the Commission's proposed approach fundamentally changes the nature of the interference protection a MMDS station must afford an ITFS station, to the detriment of both MMDS licensees and the ITFS community. The current rules afford protection based on theoretical calculations of potential interference previously proposed facilities. These calculations include certain assumptions, such as the installation at every receive site of a so-called "reference antenna." ITFS receive sites can be constructed with inferior antennas; however, the ITFS licensee does so at its own risk. In the real world, many ITFS licensees have installed reception equipment with discrimination characteristics inferior to those of the reference antenna in order to gain cost savings. To now force MMDS licensees to protect those inferior installations would unnecessarily preclude new MMDS facilities.

In addition, requiring MDS applicants to protect receive sites that were proposed long after the MDS application was filed, but happen to be constructed prior to the commencement of MDS operations, is both fundamentally unfair and rife with the potential for greenmail. No MDS applicant who designs its facility to protect all of the ITFS receive sites in existence at the time it files should then find itself having to protect ITFS receive sites proposed long afterwards. Particularly now that a few unscrupulous entities have begun to utilize unsuspecting ITFS applicants to file strike applications for

greenmail purposes, WCA has good reason to be concerned that ITFS receive sites will be added after MDS applications are filed in order to block the initiation of MDS service.

By the same token, abandonment of a theoretical analysis will necessarily mean that ITFS interests will lose protection at receive sites proposed prior to the MDS facility in question, but not constructed at the time the MDS station commences operation. That result would be fundamentally unfair to the ITFS community, which is entitled to protection of any receive site for which an application was filed and cut-off protection afforded prior to the submission of the MDS application in question.

Finally, WCA is greatly concerned that the Commission's proposal hinges on the requirement that the MMDS channel(s) in issue cease operating as soon as a complaint is received.[72] Given the limited channels capacity available for wireless cable, no operator can afford to lose channels for too long while the Commission considers interference complaints. Delays will prove particularly troublesome where all four channels must be turned off.[73] WCA does not believe it will be possible to develop a streamlined complaint resolution process that will yield fair results quickly given the complexity of interference protection issues. The MDS licensee, for example, will have to be given an opportunity to determine whether the ITFS reception equipment is properly

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[72] *See NPRM, supra* note 1, at ¶ 15 n. 29.

[73] With respect to applications for the E and F Group MMDS channels, this could occur whenever there is an adjacent channel grandfathered ITFS facility in the vicinity. With respect to MMDS applications for the A, B, C, D or G Group channels under the rules adopted in the *Second Report and Order* in General Docket No. 90-54, the risks are even more substantial, since these channels are most extensively used for ITFS purposes.

oriented to receive the maximum possible desired signal level and whether the ITFS transmission equipment is operating as authorized. The Commission no doubt will be required to not only make a final determination on the interference issue, but to referee innumerable discovery-related issues and perhaps even conduct its own examinations of facilities. It is inevitable that these disputes will drag on (particularly since the ITFS licensee will gain leverage in any settlement discussions the longer it can delay), delaying service to the public and imposing a burden on the Commission's staff.

C. The Proposed Imposition Of A Restriction On Antenna Height Is Inappropriate And Would Adversely Impact Existing Operators.

In WCA's view, one of the more disturbing aspects of the *NPRM* is the Commission's suggestion that it might be appropriate to restrict the height of MDS transmission antennas "to prevent the possibility of interference resulting from MDS transmitting antennas operating at HAATs greater then 180 meters (or whatever HAAT value is used to determine the co-channel separation)."[74] The imposition of a restriction on MDS transmission antenna height, particularly one expressed in terms of HAAT, would significantly reduce the quality of service that the industry can provide to consumers and have a significant adverse impact on existing operations.

Of course, the Commission is correct in recognizing that a height restriction should go hand-in-hand with station-to-station separation standards calculated based on assumed antenna heights. However, that merely illustrates another deficiency in the

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[74]*NPRM, supra* note 1, at ¶ 12 n. 20.

concept of using station-to-station separation standards. The simple fact is that many wireless cable systems are operating at heights far above the 180 meter HAAT limit proposed in the *NPRM*, and for very good reason. While HAAT restrictions may make sense when applied in other contexts, a HAAT restriction is fundamentally at odds with the line-of-sight nature of operations in the 2.1 GHz and 2.5 GHz bands. Because of terrain, foliage and building blockages, wireless cable operators generally attempt to mount their transmission antennas as high above their service area as possible in order to increase the probability that an unobstructed transmission path can be achieved between the transmission antenna and a prospective subscriber's reception antenna.

Generally, an operator will mount its transmission antennas atop a tall building, on a tall communications tower, or on a smaller communications tower erected on a ridge or mountain overlooking the operator's intended service area. Although doing so increases the operator's costs, it greatly expands the number of residences -- even those in close proximity to the transmitter -- to which the system has the necessary unobstructed transmission path.

None of this should come as any surprise to the Commission. In the past, the Commission has considered and rejected calls for limitations on the height of MDS transmission antennas. As the Commission clearly stated in addressing this issue:

> We recognize that by declining to place a limit on transmitting antenna height, we could be encouraging MDS operators to place antennas higher that needed to serve their service area. However, we also recognize that it could be expensive to construct higher antennas; and if the additional

> height did not add significantly to the area that could be served, it would be unlikely that any MDS operator would spend the necessary money without realizing any return. In addition, our reuls require all MDS operators to construct their facilities so as to not block cochannel use in adjacent areas. Thus, if an operator did construct an unnecessarily high antenna, we have the regulatory tools to deal with such an occurrence. Finally, in regard to transmitting antenna height, we do not believe there is anything wrong with an MDS operator raising its antenna . . . if the purpose is to get its signal over obstructions within its service area.[75]

The same holds true today.

While the Commission's prior analysis demonstrates that the public is best served by allowing wireless cable operators maximum flexibility in mounting their transmission antennas, WCA is particularly concerned that the Commission would consider utilizing HAAT as the basis for imposing any height restriction. Simply put, a restriction of antenna height based on HAAT, while certainly superior to an above-ground-level standard, suffers from defects that render it an invalid proxy for the more detailed interference analysis that has served the wireless cable industry so well. Fundamentally, the problem with HAAT is that it is calculated based on a sampling of points evenly dispersed in a 360° circle within ten miles of the transmitter, while the potential for interference between two MDS stations is dependent upon the terrain between the service areas and the height of the transmission antenna of one system relative to the ground elevation of the other.

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[75] *80-113 FR&O*, 98 F.C.C.2d at 110-111.

This problem manifests itself in various ways. First, because HAAT is the based on the average of several terrain measurements, it can yield skewed results, particularly in areas that have extreme variations in terrain. In such areas, the wireless cable operator must install its antenna as high above the lowest point in its service area as possible in order to avoid terrain blockage. Otherwise, the operator will be unable to provide service to consumers who reside in those areas that are relatively low. Similarly, even in relatively flat urban areas such as New York or Houston, the wireless cable operator has no choice but to mount its transmission antennas at an extreme elevation in order to avoid the shadowing of its service area by tall buildings. The wireless cable operator for New York, for example, had little option but to mount its transmission antennas high on the Empire State Building -- otherwise its signal would have been blocked by the skyscrapers dotting Manhatten. While WCA presumes the Commission would grandfather any existing systems from antenna height restrictions,[76] these examples illustrate that the public will be ill-served by a transmission height restriction based on HAAT.

HAAT also is an inadequate measure because HAAT calculations only include terrain located within ten miles of the transmission tower. Thus, a station may comply with a HAAT restriction but, because of significant reductions in ground elevation above sea level beyond the ten mile point in the direction of another station,

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[76]As always where wireless cable is involved, any grandfathering should extend not only to existing facilities, but to any additional channels that the wireless cable system desires to add in the future.

have a significantly longer electrical horizon than under flat earth conditions. For example, assume that Station A transmits from an antenna that is 180 meters HAAT and that Station B transmits from a tower that is 80 kilometers away utilizing an antenna mounted at 180 meters HAAT. Further assume, for purposes of argument that the *NPRM* is correct in claiming that these stations will not interfere with each other, assuming flat earth conditions.[77] Now, assume that Station A is located on a plain that ends 10 miles from its transmission tower and that the earth drops precipitously towards Station B beyond the plain. Since Station A will be transmitting from an antenna mounted far higher than that of Station B employing an absolute standard, Station A has the potential for interfering with Station B, regardless of their compliance with any HAAT restriction.

Similarly, HAAT suffers because it is based on a sampling of points located in a 360° circle around the transmission point, while the potential for interference between two stations is dependent solely upon the characteristics of the terrain directly between the transmission antenna of one and the service area of the other. Thus, if Station A is located upon terrain that is sloping toward Station B, Station A may comply with a HAAT restriction, but still have an unobstructed transmission path into Station B's service area, even if Station B is located far distant from Station A.

For these reasons, WCA strongly urges the Commission not to impose any restrictions on MDS transmission antenna height. There is no evidence that wireless

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[77] *See NPRM, supra* note 1, at ¶ 12 n.20.

cable operators have been abusing their freedom to mount transmission antennas at the height of their chosing, the marketplace effectively moderates operators from mounting antennas too high, and, most importantly, there is no effective mechanism by which the Commission can regulate antenna height without adversely impacting the ability of wireless cable operators to tailor their facilities to local conditions.

V. THE COMMISSION SHOULD AFFORD THE HIGHEST PROCESSING PRIORITY TO THOSE APPLICATIONS MOST LIKELY TO BENEFIT A WIRELESS CABLE OPERATOR.

Historically, one of the greatest challenges facing prospective wireless cable operators is the daunting task of maneuvering applications for up to thirty-three MDS and ITFS channels through Commission processing. For some time now, WCA has been advocating that the Commission adopt a system under which the highest processing priority would be afforded to those applications most likely to benefit legitimate wireless cable operators.[78] WCA believes that such an approach should take precedence over that proposed in the *NPRM*, which focuses on when an application was filed rather than the likelihood that it will ever be part of a viable wireless cable system.[79]

The problem the wireless industry faces has been two-fold. As noted previously, the staff resources devoted to processing MDS and ITFS applications has not kept pace with the number of applications being filed. The marketplace success of those

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[78] *See, e.g.* Letter to Chairman Alfred C. Sikes from Paul J. Sinderbrand, Counsel to WCA (dated Jan. 21, 1992).

[79] *See NPRM, supra* note 1, at ¶¶ 23-25.

wireless cable systems that are operating, coupled with the improved regulatory environment created as a result of General Docket No. 90-54, has spurred an unprecedented number of applications for wireless cable facilities. In addition, the Common Carrier and Mass Media Bureaus are both seeing a dramatic increase in the number of applications that appear to be either speculative or strike applications. As a result, those who are truly interested in developing wireless cable systems just cannot secure timely processing of their applications. Compounding the problem, the two Bureaus historically have not coordinated in developing processing priorities, so prospective wireless operators often find themselves with some, but not all, of the licenses they need to launch their systems.

WCA believes that the two most productive steps the Commission can take at this time are (1) to give the highest application processing priority to the issuance of licenses that will be employed by legitimate wireless cable operators, and (2) to coordinate the processing of ITFS and MDS applications so that all of the pending applications for a given market are processed simultaneously. What follows is WCA's suggestion as to how the Commission can accomplish this goal.

WCA believes the focal point of the Commission's effort should be a "Wireless Cable Processing Committee" consisting of the chiefs of whatever branch or branches ultimately are assigned responsibility for processing MDS and ITFS applications and the Managing Director, or their designees. This committee would meet periodically to address any issue relating to the processing of wireless cable-related applications, but

its primary role would be to consider written requests submitted by existing or prospective wireless cable operators for expedited treatment of pending MDS and ITFS applications. Because of the importance of the major markets to the overall success of the wireless cable industry, WCA suggests that when the processing resources are exceeded by demand for expedited processing, the committee prioritize on the basis of market size. To the extent that processing resources exceed the demand for expedited processing, the Commission should proceed with application processing using the priorities proposed in the *NPRM*.

Obviously, the availability of expedited processing must be limited, or else this new system will grind to a halt under a flood of requests. WCA believes that the committee should only consider requests for expedited processing where it is likely that the requesting party will rapidly commence wireless cable operations if accelerated consideration is granted. Imposing two conditions on the filing of requests for expedited consideration should assure that accelerated processing yields rapid service. First, the wireless cable operator requesting expedited processing should be required to demonstrate to the committee that it has secured through licenses, cut-off applications that are not mutually exclusive with other timely filed applications, and/or leases, at least twelve channels (including at least four MDS channels).[80] Absent such a requirement,

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[80]In the *Second Report and Order* in General Docket No. 90-54, the Commission recognized that only those who have secured at least four MDS channels in a market are likely to construct a wireless cable system, and WCA agrees. *Amendment of Parts 21, 43, 74, 78, and 94 of the Commission's Rules Governing Use of the Frequencies in the* (continued...)

the committee is likely to be asked to expedite the processing of applications for markets where the operator has secured too few channels to rapidly launch. In WCA's view, twelve channels, including at least four full-time MDS channels, is the minimum necessary for marketplace viability.

Second, the committee should extract a *quid pro quo* from those who would benefit from expedited processing -- a commitment to rapid construction of the proposed facilities. Those who want the Commission to hurry should be willing to do so themselves. WCA suggests that the Commission require both (1) that the equipment necessary to construct a facility authorized on an accelerated basis be ordered within fourteen days after all of the applications have been granted, and (2) that any facility authorized as a result of expedited processing be constructed within six months after all of the applications have been granted.[81] This should provide an adequate time to secure and install equipment. Extensions should only be granted in the most compelling of circumstances, such as the inability of manufacturers to deliver equipment that was timely ordered, or accidental damage to essential equipment.

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[80](...continued)
2.1 and 2.5 GHz Bands Affecting: Private Operational-Fixed Microwave Service, Multichannel Multipoint Distribution Service, Multichannel Multipoint Distribution Service, Instructional Television Fixed Service, and Cable Television Relay Service, 6 FCC Rcd 6792, 6803 (1991).

[81]Normally, MDS stations must be constructed within twelve months and ITFS stations must be constructed within eighteen months.

Where wireless cable operators have been able to run the Commission's processing gauntlet, wireless cable has proven successful. Recently launched systems in Riverside/San Bernardino, California and Tucson, Arizona, for example, continue to expand at a remarkable pace. Not only are these systems providing much needed competition to franchised cable monopolies, they are providing significant funding for local educators in the way of excess ITFS capacity lease fees, distributing educational programming more broadly then ever before possible and creating local employment opportunities. WCA believes that by adopting the "one stop shopping" proposal it advances today, the Commission will accelerate wireless cable's effort to bring these same benefits to communities across America by focusing the Commission's processing power on the markets most likely to see a rapid introduction of service.

VI. MODERATE RULE CHANGES WILL EXPEDITE THE PROCESSING OF MDS APPLICATIONS.

A. The Commission Should Adopt The NPRM's Proposal To Revise The New Rules Regarding Service Of Interference Analyses On ITFS Interests To Avoid Unnecessary Delays In Processing MDS Applications.

In the *NPRM*, the Commission has proposed to amend Section 21.902(i) of the Rules to eliminate provisions that unnecessarily delay the processing of MDS applications by affording ITFS entities far longer than they reasonably need to petition to deny MDS applications.[82] WCA fully supports that proposal -- indeed,

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[82]*See NPRM, supra* note 1, at ¶ 23 n.43.